NSAC/EAPO Symposium on Innovative Fishing
"Precision-fishing: re-imagining bottom-trawling through innovative gear"
Guiding Questions and instructions for breakout sessions

Note to participants

The purpose of the symposium is to gather and disseminate knowledge that can promote Precision Fishing through technological advance, incentive-based management approaches, better understanding of opportunities already there, and a common commitment to being accountable for catches taken and impacts exerted on the marine environment.

Precision Fishing means harvesting methods that allow the fishing industry to optimize their operations, catch and value within properly defined boundaries for catches and impacts on the environment.

Building on the work in NSAC and EAPO, ICES report on innovative gear and the European Parliament Fisheries Committee Study Increasing selectivity in EU fisheries, we ask participants to give their view on the following issues. What are the barriers and where do you see solutions?

In both breakout sessions, participants will be pre-divided into seven mixed groups named after the Latin names for flatfish/demersal species (*Scophthalmus maximus, Solea Solea, Gadus Morhua, Pleuronectes platessa, Pandalus Borealis, Limanda Limanda, Hippoglossus hippoglossus*). Each group will have an appointed speaker, who will be responsible for communicating the outcomes of the breakout sessions. Neither the assigned groups nor the group leads are set in stone – if there is a wish to exchange with another participant, feel free to do so, though we advise to be mindful of maintaining the mixed composition.

Below you will find some guiding questions, which you may or may not use when identifying challenges and solutions. Each table will be given a set of post-it notes on which each participant will be able to write their suggestions. Each color denotes one aspect of the PESTEL analysis (Political=red, Economic=blue, Social=orange, Technological=purple, Environmental=green, and Legal=yellow) (inspired by ICES approach). Once a challenge/solution is identified, you should think about which aspect it belongs to and use that color of the post-it to note it down.

NSAC is part-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the EU Commission. Neither the European Union nor the EU Commission can be held responsible for them.

While all proposals will be collected, recorded, and accounted for in the event report, each group will be asked to identify the three most impactful challenges/solutions, and the group lead will be responsible for entering them on the interactive Miro board. There are seven groups, which means that the presentations of outcomes will have to be streamlined to a little more than a minute per group. Participants will always have the chance to comment if they feel that anything important has been omitted from the final list of priorities.

Breakout sessions 1: challenges, bottlenecks, disablers

Do management objectives support Precision Fishing. Define barriers and ways forward.

For example: Are quota top-ups used the right way? Is "free choice of gear" a real option, and under what circumstances may it improve selective fishing? Do quota flexibility, technical rules, exemptions etc. take into account trade-off conflicts in mixed fisheries? Should "Precision Fishing" serve the "size paradigm" or can precision mean to catch a targeted, valuable mix of species with varying retention lengths? Is catch accountability (REM) a condition for freedoms that can be offered to fishers? Are stakeholder groups supporting each other in achieving mutual objectives? How do they cooperate and what challenges do they face?

Technology is advancing but the uptake by fishers and MS mostly lags behind. Why, and what to do?

For example: Are pilot opportunities in the Technical Regulation too difficult to use? Is funding available, sufficient and easy to access? Is it due to social resistance against the uptake of new methods by others or demotivation due to limiting policy requirements? Gear takes time to set up and tweak, so it works effectively, and there is uncertainty regarding requirements to meet minimal legal gear standards. Do Member States and national science engage enough in the issues facing fishers? Innovation may leave some fishers behind, is that a policy problem? Fisheries innovation has been a charged political topic since the pulse case. What are the challenges posed by the politicization of innovation? What about the level-playing field – how do we ensure it? Which other drivers of the lack of uptake can you identify? How can we enhance stakeholder engagement and connections between the researchers, regulators and end-users to ensure legitimacy and buy-in?

Bottom-trawling ban. What is the objective?

For example: If the objective is to catch MSY while respecting environmental boundaries, can the environmental barriers be defined not by gear but by impact, in order to spur innovation in low-impact gear and methods (i.e. camera based "spot-fishing")? Is the Technical Measures Regulation effective in minimising bottom contact and increasing selectivity? What are its drawbacks? Should selectivity be used as a management objective

NSAC is part-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the EU Commission. Neither the European Union nor the EU Commission can be held responsible for them.

in itself or a means to achieve broader societal/management objectives? Awareness of and decisions on trade-offs will be increasingly necessary in the future. Are current political structures fit for having difficult societal conversations and making solid, legitimate decisions that drive innovation? Where lie the bottlenecks?

Breakout session two: Technology, science and collaboration

What are the promises of technological development?

For example: In relation to both gear and sensor systems, can real-time data sharing guide where and how to fish, and will fishers share this data? Could precise VMS data provide fine-scale fishing effort needed to avoid unwanted catches? Thinking out of the box: What if the fish may be sorted on-board and released alive without escapement mortality (the MHS system)? How is the innovation culture embedded in European fishing communities? Is fisheries innovation a reactive or a proactive process? Bottom-up or top-down? Are fishers inspired and incentivised to innovate? What are the obstacles and where does optimism lie?

Is fishing "data-driven"? Can it be?

For example: The freedom to fish is linked to the outcome being reliably documented, can we take advantage of "precision data" in other situations? Can managers and ICES see a way to use real-time data for "a daily fish forecast"? What can qualitative data and closing the gap between data sampling and advice do for the fishing industry? Is AI a better advice tool to contain climate effects than regular models and benchmarking? How can we improve the level of trust in the policymakers, researchers, and processes so that it is conducive to innovation?

NSAC is part-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the EU Commission. Neither the European Union nor the EU Commission can be held responsible for them.